

SEQUENCE LISTING

10/590691

<110> Lepistö, Matti
Pawlowski, Kryzysztof

<120> Methods for Identifying Compounds Capable of Modulating the Hydrolase Activity of CLCA Protein

<130> 06275-519US1

<150> PCT/SE2005/000316
2005-03-03

<150> SE 0400564-1

<151> 2004-03-05

<160> 44

<170> PatentIn version 3.1

<210> 1
<211> 302
<212> PRT
<213> Bos taurus

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Pro Ser Val Pro Glu Asp Glu Lys Leu Ile Glu Asn Ile Lys Glu Met
35 40 45
Val Thr Glu Ala Ser Thr Tyr Leu Phe His Ala Thr Lys Arg Arg Val
50 55 60
Tyr Phe Arg Asn Val Ser Ile Leu Ile Pro Met Thr Trp Lys Ser Lys
65 70 75 80
Ser Glu Tyr Phe Ile Pro Lys Gln Glu Ser Tyr Asp Gln Ala Asp Val
85 90 95
Ile Val Ala Asn Pro Tyr Leu Lys Tyr Gly Asp Asp Pro Tyr Thr Leu
100 105 110
Gln Tyr Gly Arg Cys Gly Glu Lys Gly Lys Tyr Ile His Phe Thr Pro
115 120 125
Asn Phe Leu Leu Thr Asn Asn Phe His Ile Tyr Gly Ser Arg Gly Arg
130 135 140
Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Ile Phe Asp Glu
145 150 155 160
Tyr Asn Val Asp Gln Pro Phe Tyr Ile Ser Arg Lys Asn Thr Ile Glu
165 170 175
Ala Thr Arg Cys Ser Thr His Ile Thr Gly Ile Asn Val Val Phe Lys
180 185 190
Lys Cys Pro Gly Gly Ser Cys Ile Thr Ser Leu Cys Arg Arg Asp Ser
195 200 205
Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr Phe Leu Pro Lys Lys Ser
210 215 220
Gln Thr Ala Lys Glu Ser Ile Met Phe Met Pro Ser Leu His Ser Val
225 230 235 240

Thr	Glu	Phe	Cys	Thr	Glu	Lys	Thr	His	Asn	Thr	Glu	Ala	Pro	Asn	Leu
				245				250						255	
Gln	Asn	Lys	Met	Cys	Asn	Gly	Lys	Ser	Thr	Trp	Asp	Val	Ile	Met	Asn
			260					265					270		
Ser	Val	Asp	Phe	Gln	Asn	Thr	Ser	Pro	Met	Thr	Glu	Met	Asn	Pro	Pro
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Thr	His	Pro	Thr	Phe	Ser	Leu	Leu	Lys	Ser	Lys	Gln	Arg	Val		
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<212> PRT
<213> *Homo sapiens*

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 Glu Gly Ala Leu Ser Asn Ser Leu Ile Gln Leu Asn Asn Asn Gly Tyr
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 Glu Gly Ile Val Val Ala Ile Asp Pro Asn Val Pro Glu Asp Glu Thr
 35 40 45
 Leu Ile Gln Gln Ile Lys Asp Met Val Thr Gln Ala Ser Leu Tyr Leu
 50 55 60
 Phe Glu Ala Thr Gly Lys Arg Phe Tyr Phe Lys Asn Val Ala Ile Leu
 65 70 75 80
 Ile Pro Glu Thr Trp Lys Thr Lys Ala Asp Tyr Val Arg Pro Lys Leu
 85 90 95
 Glu Thr Tyr Lys Asn Ala Asp Val Leu Val Ala Glu Ser Thr Pro Pro
 100 105 110
 Gly Asn Asp Glu Pro Tyr Thr Glu Gln Met Gly Asn Cys Gly Glu Lys
 115 120 125
 Gly Glu Arg Ile His Leu Thr Pro Asp Phe Ile Ala Gly Lys Lys Leu
 130 135 140
 Ala Glu Tyr Gly Pro Gln Gly Lys Ala Phe Val His Glu Trp Ala His
 145 150 155 160
 Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Asn Asp Glu Lys Phe Tyr
 165 170 175
 Leu Ser Asn Gly Arg Ile Gln Ala Val Arg Cys Ser Ala Gly Ile Thr
 180 185 190
 Gly Thr Asn Val Val Lys Lys Cys Gln Gly Gly Ser Cys Tyr Thr Lys
 195 200 205
 Arg Cys Thr Phe Asn Lys Val Thr Gly Leu Tyr Glu Lys Gly Cys Glu
 210 215 220
 Phe Val Leu Gln Ser Arg Gln Thr Glu Lys Ala Ser Ile Met Phe Ala
 225 230 235 240
 Gln His Val Asp Ser Ile Val Glu Phe Cys Thr Glu Gln Asn His Asn
 245 250 255
 Lys Glu Ala Pro Asn Lys Gln Asn Gln Lys Cys Asn Leu Arg Ser Thr
 260 265 270
 Trp Glu Val Ile Arg Asp Ser Glu Asp Phe Lys Lys Thr Thr Pro Met
 275 280 285
 Thr Thr Gln Pro Pro Asn Pro Thr Phe Ser Leu Leu Gln Ile Gly Gln
 290 295 300
 Arg Ile
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<210> 3
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 <212> PRT
 <213> Homo sapiens

<400> 3
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 20 25 30
 Asp Ile Val Ile Val Ile Asp Pro Ser Val Pro Glu Asp Glu Lys Ile
 35 40 45
 Ile Glu Gln Ile Glu Asp Met Val Thr Thr Ala Ser Thr Tyr Leu Phe
 50 55 60
 Glu Ala Thr Glu Lys Arg Phe Phe Lys Asn Val Ser Ile Leu Ile
 65 70 75 80
 Pro Glu Asn Trp Lys Glu Asn Pro Gln Tyr Lys Arg Pro Lys His Glu
 85 90 95
 Asn His Lys His Ala Asp Val Ile Val Ala Pro Pro Thr Leu Pro Gly
 100 105 110
 Arg Asp Glu Pro Tyr Thr Lys Gln Phe Thr Glu Cys Gly Glu Lys Gly
 115 120 125
 Glu Tyr Ile His Phe Thr Pro Asp Leu Leu Leu Gly Lys Lys Gln Asn
 130 135 140
 Glu Tyr Gly Pro Pro Gly Lys Leu Phe Val His Glu Trp Ala His Leu
 145 150 155 160
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr Arg
 165 170 175
 Ala Lys Ser Lys Lys Ile Glu Ala Thr Arg Cys Ser Ala Gly Ile Ser
 180 185 190
 Gly Arg Asn Arg Val Tyr Lys Cys Gln Gly Gly Ser Cys Leu Ser Arg
 195 200 205
 Ala Cys Arg Ile Asp Ser Thr Thr Lys Leu Tyr Gly Lys Asp Cys Gln
 210 215 220
 Phe Phe Pro Asp Lys Val Gln Thr Glu Lys Ala Ser Ile Met Phe Met
 225 230 235 240
 Gln Ser Ile Asp Ser Val Val Glu Phe Cys Asn Glu Lys Thr His Asn
 245 250 255
 Gln Glu Ala Pro Ser Leu Gln Asn Ile Lys Cys Asn Phe Arg Ser Thr
 260 265 270
 Trp Glu Val Ile Ser Asn Ser Glu Asp Phe Lys Asn Thr Ile Pro Met
 275 280 285
 Val Thr Pro Pro Pro Pro Val Phe Ser Leu Leu Lys Ile Arg Gln
 290 295 300
 Arg Ile
 305

<210> 4
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 <213> Homo sapiens

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 Tyr Asn Gly Leu Leu Ile Ala Ile Asn Pro Gln Val Pro Glu Asn Gln
 35 40 45
 Asn Leu Ile Ser Asn Ile Lys Glu Met Ile Thr Glu Ala Ser Phe Tyr
 50 55 60
 Leu Phe Asn Ala Thr Lys Arg Arg Val Phe Phe Arg Asn Ile Lys Ile
 65 70 75 80
 Leu Ile Pro Ala Thr Trp Lys Ala Asn Asn Ser Lys Ile Lys Gln
 85 90 95
 Glu Ser Tyr Glu Lys Ala Asn Val Ile Val Thr Asp Trp Tyr Gly Ala
 100 105 110
 His Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Arg Gly Cys Gly Lys Glu
 115 120 125
 Gly Lys Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Asn Asp Asn Leu
 130 135 140
 Thr Ala Gly Tyr Gly Ser Arg Gly Arg Val Phe Val His Glu Trp Ala
 145 150 155 160
 His Leu Arg Trp Gly Val Phe Asp Glu Tyr Ile Asn Asp Lys Pro Phe
 165 170 175
 Tyr Ile Asn Gly Gln Asn Gln Ile Lys Val Thr Arg Cys Ser Ser Asp
 180 185 190
 Ile Thr Gly Ile Phe Val Cys Glu Lys Gly Pro Cys Pro Gln Glu Asn
 195 200 205
 Cys Ile Ile Ser Lys Leu Phe Lys Glu Gly Cys Thr Phe Ile Tyr Asn
 210 215 220
 Ser Thr Gln Asn Ala Thr Ala Ser Ile Met Phe Met Gln Ser Leu Ser
 225 230 235 240
 Ser Val Val Glu Phe Cys Asn Ala Ser Thr His Asn Gln Glu Ala Pro
 245 250 255
 Asn Leu Gln Asn Gln Met Cys Ser Leu Arg Ser Ala Trp Asp Val Ile
 260 265 270
 Thr Asp Ser Ala Asp Phe His His Ser Phe Pro Met Asn Gly Thr Glu
 275 280 285
 Leu Pro Pro Pro Pro Thr Phe Ser Leu Val Gln Ala Gly Asp Lys Val
 290 295 300

<210> 5
 <211> 259
 <212> PRT
 <213> Homo sapiens

<400> 5
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 20 25 30
 Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Lys Leu Ile Gln
 35 40 45
 Asn Ile Lys Glu Met Val Thr Glu Ala Ser Thr His Leu Phe His Ala
 50 55 60
 Thr Lys Gln Arg Ala Tyr Phe Arg Asn Val Ser Ile Leu Ile Pro Met
 65 70 75 80
 Thr Tyr Lys Ser Lys Ser Glu Tyr Leu Ile Pro Lys Gln Glu Thr Tyr
 85 90 95
 Asp Gln Ala Asp Val Ile Val Ala Asp Leu Tyr Leu Lys Tyr Gly Asp

100	105	110	
Asp Pro Tyr Thr Leu Gln Tyr	Gly Gln Cys	Gly Asp Lys	
115	120	125	
Ile His Phe Thr Pro Asn Phe	Leu Leu Thr Asn Asn	Leu Ala Thr Tyr	
130	135	140	
Gly Pro Arg Gly Lys Val Phe	Val His Gly Trp	Ala His Leu Arg Trp	
145	150	155	160
Gly Val Phe Asp Glu Tyr Asn	Val Asp Gln Pro	Phe Tyr Ile Ser Arg	
165	170	175	
Arg Asn Thr Thr Glu Ala Thr	Arg Cys Ser Thr Arg	Ile Thr Val Tyr	
180	185	190	
Met Val Leu Asn Glu Cys Lys	Gly Ala Ser Cys	Ile Ala Arg Pro Phe	
195	200	205	
Arg Arg Asp Ser Gln Thr	Gly Leu Tyr Glu Ala	Lys Cys Thr Phe Ile	
210	215	220	
Pro Lys Arg Ser Gln Thr Ala	Lys Glu Ser Ile	Val Phe Met Gln Asn	
225	230	235	240
Leu Asp Ser Val Thr Glu Phe	Cys Thr Glu Lys	Thr His Asn Lys Glu	
245	250	255	
Ala Pro Asn			

<210> 6
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 <212> PRT
 <213> Mus musculus

<400> 6			
Leu Lys Leu Lys Glu Asn Gly Tyr Asp	Gly Leu Leu Val Ala Ile Asn		
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Pro Arg Val Pro Glu Asp Leu Lys	Leu Ile Thr Asn Ile Lys	Glu Met	
20	25	30	
Ile Thr Glu Ala Ser Phe Tyr	Leu Phe Asn Ala Thr Lys	Arg Arg Val	
35	40	45	
Phe Phe Arg Asn Val Gln	Ile Leu Val Pro Ala Thr	Trp Thr Asp His	
50	55	60	
Asn Tyr Ser Arg Val Arg	Gln Glu Ser Tyr Asp	Lys Ala Asn Val Ile	
65	70	75	80
Val Ala Glu Gln Ser Glu Glu	His Gly Asp Asp Pro	Tyr Thr Leu Gln	
85	90	95	
His Arg Gly Cys Gly Gln Glu	Gly Arg Tyr Ile His	Phe Thr Pro Ser	
100	105	110	
Phe Leu Leu Asn Asp Glu	Leu Ala Gly Tyr	Gly Ala Arg Gly Arg	
115	120	125	
Val Phe Val His Glu Trp	Ala His Leu Arg Trp	Gly Val Phe Asp Glu	
130	135	140	
Tyr Asn Asn Asp Lys	Pro Phe Tyr Val Asn	Gly Arg Asn Glu Ile Gln	
145	150	155	160
Val Thr Arg Cys Ser	Ser Asp Ile Thr	Gly Val Phe Val Cys Glu Lys	
165	170	175	
Gly Leu Cys Pro His Glu Asp	Cys Ile Ile Ser Lys	Ile Phe Arg Glu	
180	185	190	
Gly Cys Thr Phe Leu Tyr	Asn Ser Thr Gln	Asn Ala Thr Gly Ser Ile	
195	200	205	
Met Phe Met Pro Ser Leu Pro	Ser Val Val Glu	Phe Cys Asn Glu Ser	
210	215	220	
Thr His Asn Gln Glu Ala Pro	Asn Leu Gln Asn	Gln Val Cys Ser Leu	

225	230	235	240
Arg Ser Thr Trp Asp Val Ile Thr Ala Ser Ser Asp Leu Asn His Ser			
245	250	255	
Leu Pro Val His Gly Val Gly Leu Pro Ala Pro Pro Thr Phe Ser Leu			
260	265	270	
Leu Gln Ala Gly Asp Arg Val			
275			

<210> 7
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 <212> PRT
 <213> Mus musculus

<400> 7			
Met Val Pro Gly Leu Gln Val Leu Leu Phe Leu Thr Leu His Leu Leu			
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Gln Asn Thr Glu Ser Ser Met Val His Leu Asn Ser Asn Gly Tyr Glu			
20	25	30	
Gly Val Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Arg Leu			
35	40	45	
Ile Pro Ser Ile Lys Glu Met Val Thr Gln Ala Ser Thr Tyr Leu Phe			
50	55	60	
Glu Ala Ser Gln Gly Arg Val Tyr Phe Arg Asn Ile Ser Ile Leu Val			
65	70	75	80
Pro Met Thr Trp Lys Ser Lys Pro Glu Tyr Leu Met Pro Lys Arg Glu			
85	90	95	
Ser Tyr Asp Lys Ala Asp Val Ile Val Ala Asp Pro His Leu Gln His			
100	105	110	
Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly			
115	120	125	
Gln Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asp Asn Leu Arg			
130	135	140	
Ile Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu			
145	150	155	160
Arg Trp Gly Val Phe Asp Glu Tyr Asn Val Asp Gln Pro Phe Tyr Met			
165	170	175	
Ser Arg Lys Asn Thr Ile Glu Ala Thr Arg Cys Ser Thr Arg Ile Thr			
180	185	190	
Gly Thr Asn Val Val His Asn Cys Glu Arg Gly Asn Cys Val Thr Arg			
195	200	205	
Ala Cys Arg Arg Asp Ser Lys Thr Arg Leu Tyr Glu Pro Lys Cys Thr			
210	215	220	
Phe Ile Pro Asp Lys Ile Gln Thr Ala Gly Ala Ser Ile Met Phe Met			
225	230	235	240
Gln Asn Leu Asn Ser Val Val Glu Phe Cys Thr Glu Lys Asn His Asn			
245	250	255	
Ala Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Arg Arg Ser Thr			
260	265	270	
Trp Asp Val Ile Lys Thr Ser Ala Asp Phe Gln Asn Ala Pro Pro Met			
275	280	285	
Arg Gly Thr Glu Ala Pro Pro Pro Thr Phe Ser Leu Leu Lys Ser			
290	295	300	
Arg Arg Arg Val			
305			

<210> 8
 <211> 308
 <212> PRT
 <213> Mus musculus

<400> 8
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 Gln Asn Thr Glu Ser Ser Met Val His Leu Asn Ser Asn Gly Tyr Glu
 20 25 30
 Gly Val Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Arg Leu
 35 40 45
 Ile Pro Ser Ile Lys Glu Met Val Thr Gln Ala Ser Thr Tyr Leu Phe
 50 55 60
 Glu Ala Ser Gln Gly Arg Val Tyr Phe Arg Asn Ile Ser Ile Leu Val
 65 70 75 80
 Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr Leu Met Pro Lys Arg Glu
 85 90 95
 Ser Tyr Asp Lys Ala Asp Val Ile Val Ala Asp Pro His Leu Gln His
 100 105 110
 Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly
 115 120 125
 Gln Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asp Asn Leu Arg
 130 135 140
 Ile Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu
 145 150 155 160
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Val Asp Arg Pro Phe Tyr Ile
 165 170 175
 Ser Arg Lys Asn Thr Ile Glu Ala Thr Arg Cys Ser Ala Ser Ile Thr
 180 185 190
 Gly Lys Lys Val Val His Glu Cys Gln Arg Gly Ser Cys Val Thr Arg
 195 200 205
 Ala Cys Arg Arg Asp Ser Lys Thr Arg Leu Tyr Glu Pro Lys Cys Thr
 210 215 220
 Phe Ile Pro Asp Lys Ile Gln Thr Ala Gly Ala Ser Ile Met Phe Met
 225 230 235 240
 Gln Asn Leu Asn Ser Val Val Glu Phe Cys Thr Glu Asn Asn His Asn
 245 250 255
 Ala Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Arg Arg Ser Thr
 260 265 270
 Trp Asp Val Ile Lys Ala Ser Ala Asp Phe Gln Asn Ser Pro Pro Met
 275 280 285
 Arg Gly Thr Glu Ala Pro Pro Pro Pro Thr Phe Ser Leu Leu Lys Ser
 290 295 300
 Arg Arg Arg Val
 305

<210> 9
 <211> 307
 <212> PRT
 <213> Mus musculus

<400> 9
 Met Glu Ser Leu Lys Ser Pro Val Phe Leu Leu Ile Leu His Leu Leu
 1 5 10 15
 Glu Gly Val Leu Ser Glu Ser Leu Ile Gln Leu Asn Asn Asn Gly Tyr

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Glu	Gly	Ile	Val	Ile	Ala	Ile	Asp	His	Asp	Val	Pro	Glu	Asp	Glu	Ala
35							40					45			
Leu	Ile	Gln	His	Ile	Lys	Asp	Met	Val	Thr	Gln	Ala	Ser	Pro	Tyr	Leu
50							55				60				
Phe	Glu	Ala	Thr	Gly	Lys	Arg	Phe	Tyr	Phe	Lys	Asn	Val	Ala	Ile	Leu
65							70			75			80		
Ile	Pro	Glu	Ser	Trp	Lys	Ala	Lys	Pro	Glu	Tyr	Thr	Arg	Pro	Lys	Leu
							85			90			95		
Glu	Thr	Phe	Lys	Asn	Ala	Asp	Val	Leu	Val	Ser	Thr	Ser	Pro	Leu	
							100			105			110		
Gly	Asn	Asp	Glu	Pro	Tyr	Thr	Glu	His	Ile	Gly	Ala	Cys	Gly	Glu	Lys
							115			120			125		
Gly	Ile	Arg	Ile	His	Leu	Thr	Pro	Asp	Phe	Leu	Ala	Gly	Lys	Lys	Leu
							130			135			140		
Thr	Gln	Tyr	Gly	Pro	Gln	Asp	Arg	Thr	Phe	Val	His	Glu	Trp	Ala	His
145							150			155			160		
Phe	Arg	Trp	Gly	Val	Phe	Asn	Glu	Tyr	Asn	Asn	Asp	Glu	Lys	Phe	Tyr
							165			170			175		
Leu	Ser	Lys	Gly	Lys	Pro	Gln	Ala	Val	Arg	Cys	Ser	Ala	Ala	Ile	Thr
							180			185			190		
Gly	Lys	Asn	Gln	Val	Arg	Arg	Cys	Gln	Gly	Gly	Ser	Cys	Ile	Thr	Asn
							195			200			205		
Gly	Lys	Cys	Val	Ile	Asp	Arg	Val	Thr	Gly	Leu	Tyr	Lys	Asp	Asn	Cys
							210			215			220		
Val	Phe	Val	Pro	Asp	Pro	His	Gln	Asn	Glu	Lys	Ala	Ser	Ile	Met	Phe
225							230			235			240		
Asn	Gln	Asn	Ile	Asn	Ser	Val	Val	Glu	Phe	Cys	Thr	Glu	Lys	Asn	His
							245			250			255		
Asn	Gln	Glu	Ala	Pro	Asn	Asp	Gln	Asn	Gln	Arg	Cys	Asn	Leu	Arg	Ser
							260			265			270		
Thr	Trp	Glu	Val	Ile	Gln	Glu	Ser	Glu	Asp	Phe	Lys	Gln	Thr	Thr	Pro
							275			280			285		
Met	Thr	Ala	Gln	Pro	Pro	Ala	Pro	Thr	Phe	Ser	Leu	Leu	Gln	Ile	Gly
							290			295			300		
Gln	Arg	Ile													
															305

<210> 10
 <211> 308
 <212> PRT
 <213> Mus musculus

<400> 10
 Met Val Pro Gly Leu Gln Val Leu Leu Phe Leu Thr Leu His Leu Leu
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 Gln Asn Thr Glu Ser Ser Met Val His Leu Asn Ser Asn Gly Tyr Glu
 20 25 30
 Gly Val Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Arg Leu
 35 40 45
 Ile Pro Ser Ile Lys Glu Met Val Thr Gln Ala Ser Thr Tyr Leu Phe
 50 55 60
 Glu Ala Thr Glu Arg Arg Phe Tyr Phe Arg Asn Val Ser Ile Leu Val
 65 70 75 80
 Pro Ile Thr Trp Lys Ser Lys Thr Glu Tyr Leu Thr Pro Lys Gln Glu
 85 90 95

Ser Tyr Asp Gln Ala Asp Val Ile Val Ala Asp Pro His Leu Gln His
 100 105 110
 Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly
 115 120 125
 Gln Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asp Asn Leu Gly
 130 135 140
 Ile Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu
 145 150 155 160
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Met Asp Arg Pro Phe Tyr Met
 165 170 175
 Ser Arg Lys Asn Thr Val Glu Ala Thr Arg Cys Ser Thr Asp Ile Thr
 180 185 190
 Gly Thr Ser Val Val Arg Glu Cys Gln Gly Ser Cys Val Ser Arg
 195 200 205
 Arg Cys Arg Arg Asp Ala Lys Thr Gly Met Gln Glu Ala Lys Cys Thr
 210 215 220
 Phe Ile Pro Asn Lys Ser Gln Thr Ala Arg Gly Ser Ile Met Phe Met
 225 230 235 240
 Gln Ser Leu Asp Ser Val Val Glu Phe Cys Thr Glu Lys Thr His Asn
 245 250 255
 Val Glu Ala Pro Asn Leu Gln Asn Lys Met Cys Asn Leu Arg Ser Thr
 260 265 270
 Trp Asp Val Ile Lys Ala Ser Ala Asp Phe Gln Asn Ala Ser Pro Met
 275 280 285
 Thr Gly Thr Glu Ala Pro Pro Leu Pro Thr Phe Ser Leu Leu Lys Ser
 290 295 300
 Arg Gln Arg Val
 305

<210> 11
 <211> 306
 <212> PRT
 <213> Sus scrofa

<400> 11
 Met Gly Ser Phe Arg Ser Ser Leu Phe Ile Leu Val Leu His Leu Leu
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 20 25 30
 Glu Gly Ile Val Ile Ala Ile Asp Pro Asn Val Pro Glu Asp Glu Arg
 35 40 45
 Leu Ile Gln Asn Ile Lys Asp Met Val Thr Lys Ala Ser Pro Tyr Leu
 50 55 60
 Phe Glu Ala Thr Glu Lys Arg Phe Tyr Phe Lys Asn Val Ala Ile Leu
 65 70 75 80
 Ile Pro Ala Ser Trp Lys Ala Lys Pro Glu Tyr Val Lys Pro Lys Leu
 85 90 95
 Glu Thr Tyr Lys Asn Ala Asp Val Val Val Thr Glu Pro Asn Pro Pro
 100 105 110
 Glu Asn Asp Gly Pro Tyr Thr Glu Gln Met Gly Asn Cys Gly Glu Lys
 115 120 125
 Gly Glu Lys Ile Tyr Phe Thr Pro Asp Phe Val Ala Gly Lys Lys Val
 130 135 140
 Leu Gln Tyr Gly Pro Gln Gly Arg Val Phe Val His Glu Trp Ala His
 145 150 155 160
 Leu Arg Trp Gly Val Phe Asn Glu Tyr Asn Asn Glu Gln Lys Phe Tyr

165	170	175
Leu Ser Asn Lys Lys Glu Gln Pro Val Ile Cys Ser Ala Ala Ile Arg		
180	185	190
Gly Thr Asn Val Leu Pro Gln Cys Gln Gly Gly Ser Cys Val Thr Lys		
195	200	205
Pro Cys Arg Ala Asp Arg Val Thr Gly Leu Phe Gln Lys Glu Cys Glu		
210	215	220
Phe Ile Pro Asp Pro Gln Gln Ser Glu Lys Ala Ser Ile Met Phe Ala		
225	230	235
Gln Ser Ile Asp Thr Val Val Glu Phe Cys Lys Glu Lys Asn His Asn		
245	250	255
Lys Glu Ala Pro Asn Asp Gln Asn Gln Lys Cys Asn Leu Arg Ser Thr		
260	265	270
Trp Glu Val Ile Gln Asp Ser Glu Asp Phe Lys Lys Thr Thr Pro Met		
275	280	285
Thr Thr Gln Pro Pro Ala Pro Thr Phe Ser Leu Leu Gln Ile Gly Gln		
290	295	300
Arg Ile		
305		

<210> 12
 <211> 308
 <212> PRT
 <213> Bos taurus

<400> 12			
Met Val Pro Arg Leu Thr Val Ile Leu Phe Leu Thr Leu His Leu Leu			
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Pro Gly Met Lys Ser Ser Met Val Asn Leu Ile Asn Asn Gly Tyr Asp			
20	25	30	
Gly Ile Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Lys Leu			
35	40	45	
Ile Gln Asn Ile Lys Glu Met Val Thr Glu Ala Ser Thr Tyr Leu Phe			
50	55	60	
His Ala Thr Lys Arg Arg Val Tyr Phe Arg Asn Val Ser Ile Leu Ile			
65	70	75	80
Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr Leu Met Pro Lys Gln Glu			
85	90	95	
Ser Tyr Asp Gln Ala Glu Val Ile Val Ala Asn Pro Tyr Leu Lys His			
100	105	110	
Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Arg Cys Gly Glu Lys Gly			
115	120	125	
Gln Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asn Asn Leu Pro			
130	135	140	
Ile Tyr Gly Ser Arg Gly Arg Ala Phe Val His Glu Trp Ala His Leu			
145	150	155	160
Arg Trp Gly Ile Phe Asp Glu Tyr Asn Gly Asp Gln Pro Phe Tyr Ile			
165	170	175	
Ser Arg Arg Asn Thr Ile Glu Ala Thr Arg Cys Ser Thr His Ile Thr			
180	185	190	
Gly Thr Asn Val Ile Val Lys Cys Gln Gly Gly Ser Cys Ile Thr Arg			
195	200	205	
Pro Cys Arg Arg Asp Ser Gln Thr Gly Leu Tyr Glu Ala Lys Cys Thr			
210	215	220	
Phe Ile Pro Glu Lys Ser Gln Thr Ala Arg Glu Ser Ile Met Phe Met			
225	230	235	240

<210> 13
<211> 247
<212> PRT
<213> *Ciona intestinalis*

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<400> 13
Glu Ser Thr Thr Leu Leu Asn Ser Ile Lys Ala Ala Trp Thr Glu Ala
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Ser Ala Ala Leu Tyr Thr Ala Thr Arg Lys Arg Ala Tyr Phe Gly Asn
20 25 30
Ile Thr Ile Leu Val Pro Lys Ser Trp Asn Gly Thr Tyr Lys Arg Ala
35 40 45
Phe Asp Glu Thr Tyr Asp Ala Ala Asp Val Val Val Thr Asn Thr Asn
50 55 60
Arg Val Arg Gly Asn Ile Pro Tyr Val Leu Gln Pro Gly Gly Cys Gly
65 70 75 80
Glu Pro Gly Thr Arg Ile Phe Thr Thr Arg Asp Tyr Tyr Thr Asn Asp
85 90 95
Thr Tyr Val Glu Ser Phe Gly Gln Arg Gly Lys Val Met Val His Glu
100 105 110
Trp Ser His Tyr Arg Trp Gly Val Phe Asp Glu Ile Ala Ser Gly Asp
115 120 125
Tyr Ala Pro Phe Tyr Ile Ser Ser Thr Gly Thr Ile Glu Ala Thr Arg
130 135 140
Cys Ser Leu Gly Ile Gln Gly Glu Asn Met Ile Val Gln Asn Asn Glu
145 150 155 160
Ile Val Gln Asp Val Cys Asn Tyr Asp Pro Gln Thr Leu Leu Pro Asn
165 170 175
Ser Thr Asp Cys Lys Phe Ile Leu Ala Trp Asp Gln Asp Leu Asp Leu
180 185 190
Lys Ala Ser Ile Met Ser Tyr Gln Tyr Val Asn Glu Ile Asn Gly Phe
195 200 205
Cys Asp Asp Asn Asp Asn Asp Pro Leu Asn Arg His Asn Arg Glu Ala
210 215 220
Pro Asn Glu His Asn Asp Lys Cys Asn Lys Arg Ser Val Trp Asp Val
225 230 235 240
Ile Thr Ser Ser Val Asp Phe
245

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<210> 14
<211> 274
<212> PRT
<213> Ciona intestinalis

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<220>
<221> MISC_FEATURE
<222> 49
<223> any natural amino acid residue

<220>
<221> MISC_FEATURE
<222> 263
<223> any natural amino acid residue

<400> 14
Asn Pro Ala Val Pro Glu Asp Pro Asn Leu Val Ser Ala Ile Gln Ser
1 5 10 15
Ser Trp Ile Glu Ala Ser Gly Asp Leu Tyr Thr Ala Thr Arg Gln Arg
20 25 30
Ser Tyr Phe Gly Glu Ile Thr Ile Leu Ile Pro Lys Thr Trp Ser Lys
35 40 45
Xaa Lys Leu Val Ile Asn Gly Ser Glu Ser Tyr Glu Thr Ala Asp Val
50 55 60
Leu Ile Ala Glu Ala Asn Pro Val Tyr Gln Asp Thr Pro Tyr Thr Leu
65 70 75 80
Gln Tyr Gly Asn Cys Gly Glu Thr Ala Ser Tyr Ile His Leu Thr Pro
85 90 95
Asp Tyr Leu Thr Asn Gln Ser Phe Val Glu Asp Phe Gly Pro Arg Gly
100 105 110
Lys Ala Ile Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp
115 120 125
Glu Thr Tyr Thr Thr Gly Tyr Ser Pro Tyr Tyr Tyr Asp Ser His Gly
130 135 140
Thr Val Gln Ala Thr Arg Cys Pro Ser Thr Leu Asp Gly Lys Asn Lys
145 150 155 160
Val Val Asp Tyr Ser Thr Gly Asn Ser Arg Asp Cys Gln Arg Asn Leu
165 170 175
Glu Asn Gly Leu Met Glu Asp Gly Cys Leu Phe Leu Pro Tyr Ala Glu
180 185 190
Gln Ser Ala Asp Leu Thr Thr Ser Leu Met Ser His Gln Tyr Leu Ser
195 200 205
Gln Val Thr Met Phe Cys His Asn Asp Glu Thr Asp Ser Tyr Asn His
210 215 220
His Asn Arg Glu Ala Pro Asn Glu Gln Asn Arg Leu Cys Asp Leu Lys
225 230 235 240
Ser Ala Trp Glu Val Ile Met Glu Ser Lys Asp Phe Leu Asn Asn Ala
245 250 255
Asn Pro Arg Asn Met Val Xaa Asn Thr Asn Pro Ile Phe Arg Leu Val
260 265 270
Gln Ile

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<210> 15
<211> 282
<212> PRT
<213> Ciona intestinalis

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<400> 15
Val Thr Leu Val Asn Asn Gly Tyr Asp Gly Ile Val Val Ala Ile Asn
1 5 10 15
Pro Ala Val Ala Glu Asp Glu Thr Leu Ile Asn Lys Ile Arg Asn Met

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20	25	30	
Phe Thr Arg Ala Ser Pro Thr Leu Phe Thr Ala Thr Lys Lys Arg Ala			
35	40	45	
Tyr Phe Arg Asn Ile Asn Ile Leu Val Pro Lys Thr Trp Thr Ser Gly			
50	55	60	
Ser Tyr Gln Thr Ala Val Gly Leu Thr Tyr Arg Lys Ala Asp Val Ile			
65	70	75	80
Ile Ala Pro Pro Asn Pro Val Arg Gly Asp Asn Pro Tyr Val Leu Gln			
85	90	95	
Thr Gly Ala Cys Gly Glu Pro Gly Thr His Met His Leu Thr Pro Glu			
100	105	110	
Trp Val Asn Asp Thr Arg Glu Ser Val Tyr Gly Pro Ser Asp Lys Ala			
115	120	125	
Ile Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp Glu Tyr			
130	135	140	
Ala Thr Gly Asp His Lys Arg His Tyr Leu Asp Ser Asn Asn Val Leu			
145	150	155	160
Gln Gly Thr Arg Cys Pro Leu Ser Ile Arg Gly Val Asn Arg Glu Tyr			
165	170	175	
Val Pro Pro Tyr Gln Val Leu Asn Gln Thr Cys Ile Ile Asn Gln Thr			
180	185	190	
Thr Leu Leu Pro Ala Ser Asp Thr Cys His Phe Ile Pro Gly Ile Glu			
195	200	205	
Gln Pro Arg Gly Leu Lys Thr Ser Met Met Phe Tyr Ser Tyr Leu Ser			
210	215	220	
Ser Val Ile Glu Phe Cys His Ser Asp Pro Ser Asp Pro Val Asn Gln			
225	230	235	240
His Asn Thr Glu Ala Asp Asn Glu Gln Asn Ala Lys Cys Asn Leu Arg			
245	250	255	
Ser Thr Trp Asp Val Ile Thr Ser Thr Ser Asp Phe Ser Gly Gly Ser			
260	265	270	
Asn Pro Pro Asn Pro Thr Leu Thr Asn Leu			
275	280		

<210> 16
 <211> 286
 <212> PRT
 <213> Ciona intestinalis

<400> 16			
Ser Glu Val Asn Leu Val Asn Asn Gly Tyr Glu Gly Ile Val Val Ala			
1	5	10	15
Ile Asn Pro Ser Ile Pro Glu Asp Ala Ser Leu Val Asp Asn Ile Lys			
20	25	30	
Thr Leu Leu Asn Glu Ala Ser Pro Ile Leu Trp Ser Ala Thr Lys Asn			
35	40	45	
Arg Ala Tyr Phe Gly Glu Val Thr Ile Leu Val Pro Ser Thr Trp Thr			
50	55	60	
Gly Ser Tyr Thr Gln Ala Thr His Gly Gln Val Tyr Asn Lys Ala Asp			
65	70	75	80
Ile Ile Val Ala Asp Pro Asn Pro Gln Tyr Met Asp Thr Pro Tyr Thr			
85	90	95	
Ile Gln Tyr Gln Gln Cys Gly Asp Pro Gly Glu Tyr Ile His Leu Thr			
100	105	110	
Pro Asn Phe Leu Ser Gln Ala Gly Tyr Glu Gln Asn Tyr Gly Asn Lys			
115	120	125	

Gly Lys Ala Leu Val His Glu Trp Ala His Leu Arg Trp Gly Val Tyr
 130 135 140
 Asp Glu Tyr Ala Ser Glu Gly Tyr Ala Pro Phe Tyr Tyr Ser Asn Arg
 145 150 155 160
 Gly Gly Gly Gln Pro Tyr Met Glu Ala Thr Arg Cys Pro Leu Ala Leu
 165 170 175
 Gly Gly Val Thr Arg Tyr Pro Asn Pro Ala Asn Gly Asn Gln Leu Glu
 180 185 190
 His Cys Thr Ser Asp Pro Asn Asn Phe Leu Pro Leu Glu Gly Cys
 195 200 205
 Leu Phe Phe Pro Phe Ser Glu Leu Gly Gln Pro Asp Asp Leu Ser Ala
 210 215 220
 Ser Leu Leu Ser His Gln Phe Val Asp Gln Val Val Asp Phe Cys His
 225 230 235 240
 Asn Asp Thr Asn Asp Pro Thr Asn Leu His Asn Lys Glu Ala Pro Asn
 245 250 255
 Glu His Asn Arg Leu Cys Asp Gln Arg Ser Val Trp Glu Ile Met Met
 260 265 270
 Ala Ser Arg Asp Phe Asn Ala Val Asn His Pro Asn Pro Thr
 275 280 285

<210> 17
 <211> 273
 <212> PRT
 <213> Ciona intestinalis

<220>
 <221> MISC_FEATURE
 <222> 267
 <223> any natural amino acid residue

<400> 17
 Val Thr Leu Val Gly Asn Lys Tyr Lys Gly Ile Val Val Ala Ile Asn
 1 5 10 15
 Pro Ser Ile Pro Glu Asp Gln Asp Leu Ile Asn Asn Ile Lys Ala Leu
 20 25 30
 Leu Asn Glu Ala Ser Pro Ile Leu Trp Ser Ala Thr Lys Asn Arg Ala
 35 40 45
 Tyr Phe Gly Glu Val Thr Ile Leu Val Pro Ser Thr Trp Thr Gly Ser
 50 55 60
 Tyr Thr Gln Ala Thr His Gly Gln Val Tyr Asn Lys Ala Asp Ile Ile
 65 70 75 80
 Val Ala Asp Pro Asn Pro Gln Tyr Met Asp Thr Pro Tyr Thr Ile Gln
 85 90 95
 Tyr Gln Gln Cys Gly Asp Pro Gly Glu Tyr Ile His Leu Thr Pro Asn
 100 105 110
 Phe Ile Asn Glu Lys Asn Asp Phe Val Glu Asn Tyr Gly Ser Lys Gly
 115 120 125
 Lys Ala Leu Val His Glu Trp Ala His Leu Arg Trp Gly Ile Tyr Asp
 130 135 140
 Glu Tyr Ala Ser Glu Gly Tyr Asp Pro Phe Tyr Tyr Ser Ser Thr Gln
 145 150 155 160
 Tyr Val Gln Pro Thr Leu Glu Ala Thr Arg Cys Pro Leu Ser Val Ala
 165 170 175
 Gly Met Met Leu Tyr Leu Asp Pro Leu Ser Gly Lys Phe Glu Phe Cys
 180 185 190

Thr Ser Asn Pro Glu Asn Asn Phe Leu Pro Glu Glu Gly Cys Ile Phe
 195 200 205
 Phe Pro Arg Ser Lys Glu Gly Gln Pro Ala Asp Leu Ile Tyr Ser Phe
 210 215 220
 Ser Leu Thr Gln Val Val Asp Phe Cys His Asn Asp Thr Asn Asp Pro
 225 230 235 240
 Thr Asn Leu His Asn Lys Glu Ala Pro Asn Glu His Asn Arg Leu Cys
 245 250 255
 Asp Gln Arg Ser Val Trp Glu Val Met Asn Xaa Ser Ser Asp Phe Lys
 260 265 270
 Gln

<210> 18
 <211> 279
 <212> PRT
 <213> Ciona intestinalis

<400> 18
 Val Lys Leu Gln Ser Asn Gly Tyr Asp Gly Val Leu Val Ala Ile Asn
 1 5 10 15
 Pro Ala Val Pro Glu Asn Glu Thr Leu Ile Arg Asn Ile Arg Ala Ser
 20 25 30
 Ile Asp Leu Ile Gly Ala Thr Ser Ser His Ser Leu Phe Ile Leu Thr
 35 40 45
 Lys Lys Arg Ala Tyr Phe Arg Asn Ile Asn Ile Leu Val Pro Lys Thr
 50 55 60
 Trp Thr Gly Ala Arg Tyr Asp Thr Ala Ile Gly Leu Ser Tyr Arg Lys
 65 70 75 80
 Ala Asp Val Ile Val Ala Pro Ala Asn Ser Ala Lys Gly Asn Asn Pro
 85 90 95
 Tyr Thr Arg Gln Thr Gly Gly Cys Gly Asp Pro Gly Thr Tyr Ile His
 100 105 110
 Ile Thr Pro Glu Tyr Val Tyr Asn Pro Gln Glu His Leu Tyr Gly Pro
 115 120 125
 Arg Gly Lys Lys Ala Ile Val His Glu Trp Ser His Leu Arg Trp Gly
 130 135 140
 Val Phe Asp Glu Tyr Ala Thr Gly Asn His Lys Arg His Tyr Ile Asp
 145 150 155 160
 Ser Asn Asn Ile Leu Gln Ala Thr Arg Cys Pro Leu Ser Leu Arg Gly
 165 170 175
 Met Asn Ile Glu Tyr Ala Pro Pro Tyr Asn Thr Arg Cys Ala Val Asn
 180 185 190
 Arg Ser Ser Leu Leu Pro Leu Thr Glu Asn Cys Tyr Phe Phe Pro Ala
 195 200 205
 Ser Arg Gln Pro Arg Gly Leu Asn Ser Ser Met Met Ser Phe Ser Tyr
 210 215 220
 Leu His Ser Val Glu Ala Phe Cys His Asn Asp Pro Asn Glu Pro Ile
 225 230 235 240
 Asn Phe His Asn Ser Glu Ala Asp Asn Glu Gln Asn Ala Lys Cys Asn
 245 250 255
 Leu Lys Ser Leu Trp Glu Val Ile Gly Ala Ser Pro Asp Phe Arg Glu
 260 265 270
 Gly Ala Asn Pro Pro Asn Pro
 275

<210> 19
 <211> 241
 <212> PRT
 <213> Danio rerio

<400> 19
 Ser Val Phe Val Val Leu Trp Met Leu Leu Pro Tyr Pro Phe Thr Gly
 1 5 10 15
 Ile Lys Leu Asp Gly Gly Tyr Val Asp Ile Ser Ile Ala Ile Gly
 20 25 30
 Ala Lys Val Lys Gln Asp Asp Thr Leu Ile Asp Lys Ile Lys Glu Met
 35 40 45
 Val Thr Asp Gly Ser Phe Tyr Leu Tyr His Ala Leu Asp Lys Lys Val
 50 55 60
 Tyr Leu Lys Asp Ala Thr Ile Leu Val Pro Ser Gln Trp Ser Cys Lys
 65 70 75 80
 Ser Cys Ser Ile Ala Arg Thr Glu Leu Phe Glu Lys Ala Gln Ile Lys
 85 90 95
 Ile Asp His Ala Lys Leu Met Glu Pro Arg Thr Lys Leu Tyr Gly Glu
 100 105 110
 Cys Gly Val Gly Gly Glu Tyr Ile His Phe Thr Pro Asp Phe Leu Leu
 115 120 125
 Asn Asp Ser Ala Ile Gln Met Tyr Gly Pro Arg Gly Lys Val Phe Leu
 130 135 140
 His Glu Trp Ala His Leu Arg Trp Gly Val Tyr Asp Glu Tyr Asn Glu
 145 150 155 160
 Glu Lys Pro Phe Tyr Leu Ser Asn Gly Arg Val Glu Tyr Thr Arg Cys
 165 170 175
 Thr Thr Asn Ile Glu Gly Gln Cys Phe Glu Ile Asn Gly Gly Ser Leu
 180 185 190
 Gln Ser Cys Arg Ile Asn Pro Glu Thr Phe Leu Pro Ser Ser Asp Cys
 195 200 205
 Glu Leu Ser Pro Asn Lys Asp Gln Asn Thr Asp Ser Ser Val Met Cys
 210 215 220
 Ser Pro Ser Leu Gln Ser Leu Thr Thr Phe Cys Arg Glu Thr Glu His
 225 230 235 240
 Asn

<210> 20
 <211> 268
 <212> PRT
 <213> Gallus gallus

<220>
 <221> MISC_FEATURE
 <222> 39
 <223> any natural amino acid residue

<220>
 <221> MISC_FEATURE
 <222> 61
 <223> any natural amino acid residue

<220>
 <221> MISC_FEATURE
 <222> 65
 <223> any natural amino acid residue

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<220>
<221> MISC_FEATURE
<222> 77
<223> any natural amino acid residue

<220>
<221> MISC_FEATURE
<222> 168
<223> any natural amino acid residue

<220>
<221> MISC_FEATURE
<222> 171
<223> any natural amino acid residue

<220>
<221> MISC_FEATURE
<222> 172
<223> any natural amino acid residue

<220>
<221> MISC_FEATURE
<222> 197
<223> any natural amino acid residue

<400> 20
Met Gly Val Phe Arg Ser Leu Ile Phe Leu Leu Ser Phe Gln Leu Leu
1 5 10 15
His Val Ala Lys Gly Ser Met Val Lys Leu Asn Glu Ser Gly Tyr Glu
20 25 30
Asp Leu Val Val Cys Asn Xaa Ser Gln Arg Asp Arg Arg Cys Gln His
35 40 45
His Pro Glu His Lys Gly Asn Asp Gln Arg Cys Phe Xaa Leu Phe Val
50 55 60
Xaa Ser Tyr Lys Thr Ser Ile Phe Leu Gln Ala Leu Xaa Arg Ile Ile
65 70 75 80
Leu Pro Lys Thr Trp Lys Lys Asn Ser Thr Tyr Ser Arg Leu Lys Thr
85 90 95
Glu Ser Tyr Asn Lys Ala Asp Val Ile Ile Ala Asp Pro Tyr Leu Lys
100 105 110
Tyr Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gly Cys Ala Met Lys
115 120 125
Gly Arg Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Asp Ser Ser Leu
130 135 140
Ile Lys Val Tyr Gly Glu Arg Gly Arg Val Leu Val His Glu Trp Ala
145 150 155 160
His Thr Ser Val Gly Cys Val Xaa Arg Ile Xaa Xaa Arg Arg Asn Leu
165 170 175
Phe Asp Val Ser Glu Asn Ala Arg Val Glu Pro Thr Arg Cys Ser Ala
180 185 190
Gly Val Thr Trp Xaa Thr Cys Ile Pro Lys Leu Gln Trp Lys Thr Val
195 200 205
Tyr Asp Lys Arg Met Pro Ser Met Met Val Ser Tyr Met Lys Leu Gly
210 215 220
Cys Gly Ile Gly Asn Gly Ser Ser Ile Lys Lys Arg Lys Asn Ser Ile
225 230 235 240
Met Tyr Met Gln Ser Leu Pro Ser Val Val Glu Ser Val Ile Lys Ile

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245	250	255
Leu Ile Asn Ser Glu Val Gln Asn Met Arg Asn Arg		
260	265	

<210> 21
 <211> 192
 <212> PRT
 <213> Gallus gallus

<400> 21
 Met Gly Val Phe Arg Ser Leu Ile Phe Leu Leu Ser Phe Gln Leu Leu
 1 5 10 15
 His Val Ala Lys Gly Ser Met Val Lys Leu Asn Glu Ser Gly Tyr Glu
 20 25 30
 Gly Leu Val Val Ala Ile Asn Pro Ser Val Thr Glu Asp Ala Asn Ile
 35 40 45
 Ile Leu Asn Thr Lys Ala Met Ile Lys Asp Ala Ser Asn Tyr Leu Phe
 50 55 60
 Glu Ala Thr Lys His Arg Phe Phe Lys Ser Val Lys Ile Ile Leu
 65 70 75 80
 Pro Lys Thr Trp Lys Lys Asn Ser Thr Tyr Ser Arg Leu Lys Thr Glu
 85 90 95
 Ser Tyr Asn Lys Ala Asp Val Ile Ile Ala Asp Pro Tyr Leu Lys Tyr
 100 105 110
 Gly Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gly Cys Ala Met Lys Gly
 115 120 125
 Arg Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Asp Ser Ser Leu Ile
 130 135 140
 Lys Val Tyr Gly Glu Arg Gly Arg Val Phe Val His Glu Trp Ala His
 145 150 155 160
 Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Asn Asp Ala Pro Phe Tyr
 165 170 175
 Val Ser Glu Asn Ala Arg Val Glu Pro Thr Arg Cys Ser Ala Gly Val
 180 185 190

<210> 22
 <211> 202
 <212> PRT
 <213> Salmo salar

<400> 22
 Val Leu Leu Leu Val Tyr Leu Ser Gly Ser Thr Phe Gly Ile Lys Leu
 1 5 10 15
 Thr Gly Asn Gly Tyr Thr Asp Ile Leu Ile Ala Ile Asn Pro Val Val
 20 25 30
 Pro Glu Asp Pro Val Leu Ile Thr Gln Ile Glu Glu Met Ile Lys Glu
 35 40 45
 Ala Ser Arg His Leu Leu Asn Ala Thr Lys Lys His Leu Tyr Phe Lys
 50 55 60
 Glu Val Ala Ile Leu Val Pro Pro Asn Trp Asn Lys Gly Asn Tyr Ser
 65 70 75 80
 Lys Ala Lys Thr Glu Val Tyr Asn Lys Ala Asn Ile Ile Ile Asp Glu
 85 90 95
 Pro Asn Arg Leu His Gly Asp Gln Pro Tyr Thr Leu Gln Tyr Gly Glu
 100 105 110

Cys Gly Ser Glu Gly Gln Tyr Ile His Leu Thr Pro Asp Phe Met Leu
 115 120 125
 Asn Asp Asp Val Ser Lys Tyr Tyr Gly Pro Arg Gly Lys Val Phe Val
 130 135 140
 His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu
 145 150 155 160
 Glu Lys Pro Phe Tyr Leu Ser Gly Ser Ile Ile Glu Ala Thr Arg Cys
 165 170 175
 Thr Ile Asn Ile Thr Gly Lys Tyr Ile His Lys Arg Asp Gln Lys Asp
 180 185 190
 Cys Thr Thr Asp Pro Val Thr Gly Leu Tyr
 195 200

<210> 23
 <211> 202
 <212> PRT
 <213> Strongylocentrotus purpuratus

<220>
 <221> MISC_FEATURE
 <222> 186
 <223> any natural amino acid residue

<220>
 <221> MISC_FEATURE
 <222> 192
 <223> any natural amino acid residue

<400> 23
 Asp Val Pro Glu Asp Gln Thr Ile Ile Asp Asn Leu Ile Asp Ile Phe
 1 5 10 15
 Ser Ser Gly Ser Gly His Leu Phe Thr Ala Thr Arg Arg Arg Ala Tyr
 20 25 30
 Trp Arg Asn Ile Thr Ile Leu Ile Pro Lys Thr Trp Thr Pro Lys Pro
 35 40 45
 Glu Tyr Glu Pro Ala Arg Thr Glu Ser Phe Glu Thr Ala Asn Val Ile
 50 55 60
 Ile Asp Thr Ala Asn Pro Glu Trp Glu Asp Asn Pro Tyr Thr Leu Gln
 65 70 75 80
 Leu Gly Gly Cys Gly Val His Gly Glu Tyr Ile His Leu Thr Pro Ser
 85 90 95
 Tyr Ile Thr Asp Arg Ala Asn Ser Glu Tyr Ile Trp Gly Ser Met Gly
 100 105 110
 Lys Leu Leu Ile His Glu Trp Gly His Leu Arg Trp Gly Leu Phe Asp
 115 120 125
 Glu Tyr His Thr Asp Asp Asp Gly Val Gln Lys Phe Tyr Ala Asp Ser
 130 135 140
 Arg Gly Glu Ile Val Ala Thr Arg Cys Thr Asp Gln Leu Asn Gly Glu
 145 150 155 160
 Ala Leu Asn Ile Asn Thr Phe Ala Pro Cys Gln Arg Asp Arg Asp Thr
 165 170 175
 Gly Leu Tyr Glu Asp Asp Cys Phe Tyr Xaa Pro Asp Leu Glu Gly Xaa
 180 185 190
 Thr Ser Pro Gly Ser Ile Met Tyr Ala Gln
 195 200

<210> 24
 <211> 192
 <212> PRT
 <213> Strongylocentrotus purpuratus

<400> 24
 Gly Arg Ile Leu Met Ser Val Val Val Cys Cys Leu Val Leu Phe Ser
 1 5 10 15
 Gly Val Ser Gly Ser Asp Leu Arg Asn Ser Ile Thr Ile Gln Asp Gly
 20 25 30
 Gly Tyr Glu Asn Val Leu Ile Ala Ile Asn Lys Asp Val Pro Glu Asp
 35 40 45
 Gln Thr Ile Ile Asp Asn Leu Ile Asp Ile Phe Ser Ser Gly Ser Gly
 50 55 60
 His Leu Phe Thr Ala Thr Arg Arg Ala Tyr Trp Arg Asn Ile Thr
 65 70 75 80
 Ile Leu Ile Pro Lys Thr Trp Thr Pro Lys Pro Glu Tyr Glu Pro Ala
 85 90 95
 Arg Thr Glu Ser Phe Glu Thr Ala Asn Val Ile Ile Asp Thr Ala Asn
 100 105 110
 Pro Glu Trp Glu Asp Asn Pro Tyr Thr Leu Gln Leu Gly Gly Cys Gly
 115 120 125
 Val His Gly Glu Tyr Ile His Leu Thr Pro Ser Tyr Ile Thr Asp Arg
 130 135 140
 Ala Asn Ser Glu Tyr Ile Trp Gly Ser Met Gly Lys Leu Leu Ile His
 145 150 155 160
 Glu Trp Ser His Leu Arg Trp Gly Leu Phe Asp Glu Tyr His Thr Asp
 165 170 175
 Asp Asp Gly Val Gln Lys Phe Tyr Ala Asp Ser Arg Gly Val Arg Ser
 180 185 190

<210> 25
 <211> 131
 <212> PRT
 <213> Strongylocentrotus purpuratus

<400> 25
 Thr Ile Leu Leu Leu Glu Ile Phe Leu Val Glu Val Val Thr Gly Gln
 1 5 10 15
 Lys Asn Thr Ile Asn Leu Asn Asn Gly Ala Tyr Ser Asn Leu Leu Ile
 20 25 30
 Ala Ile Asp Lys Asn Val Ala Glu Asp Leu Asn Ile Ile Asp Asn Ile
 35 40 45
 Lys Thr Met Phe Thr Ser Ser Glu Arg Leu Tyr Leu Ala Ser Lys
 50 55 60
 Gln His Val Tyr Trp Lys His Ile Lys Ile Leu Val Pro Asn Thr Trp
 65 70 75 80
 Ser Ile Gln Ser Gly Tyr Gln Phe Ser Arg Thr Glu Thr Leu Glu Ser
 85 90 95
 Ala Asn Ile Ile Leu His Asn Phe His Asp Asp Glu Pro Phe Val Asp
 100 105 110
 Asn Leu Ala Gly Cys Gly Lys Glu Gly Thr Leu Met His Met Thr Pro
 115 120 125
 Gly Tyr Ile
 130

<210> 26
 <211> 203
 <212> PRT
 <213> Xenopus tropicalis

<400> 26
 Ala Ser Ser Tyr Leu Phe Gln Ala Thr Lys Lys Arg Leu Tyr Ile Arg
 1 5 10 15
 Ser Ala Lys Ile Leu Ile Pro Asn Thr Trp Ala Thr Asn Ser Ser Tyr
 20 25 30
 Gly Arg Pro Lys Leu Glu Ser Tyr Asp Lys Ala Asp Val Ile Val Ala
 35 40 45
 Pro Pro Phe Val Gln Gly Asp Asp Pro Tyr Thr Leu Gln Phe Gly Gly
 50 55 60
 Cys Gly Glu Lys Gly Lys Tyr Ile His Phe Thr Pro Asn Phe Leu Val
 65 70 75 80
 Asn Asp Glu Lys Met Leu Pro Ile Tyr Gly Pro Arg Gly Arg Val Phe
 85 90 95
 Val His Glu Trp Ala His Phe Arg Trp Gly Val Phe Asp Glu Tyr Asn
 100 105 110
 Tyr Asn Arg Pro Tyr Tyr Phe Ser Glu Asn Arg Lys Val Glu Ala Thr
 115 120 125
 Arg Cys Pro Leu Lys Leu Lys Gly Leu Asn Leu Ile Asp Val Cys Gln
 130 135 140
 Arg Gly Val Cys Asn Leu Glu Pro Cys Glu Tyr Asp Lys Asn Thr Gly
 145 150 155 160
 Leu Tyr Glu Glu Asp Cys Lys Phe Tyr Pro Asp Arg Asp Ile Leu Val
 165 170 175
 Glu Glu Ser Val Met Tyr Ala Gln Met Phe Glu Pro Val His Ala Phe
 180 185 190
 Cys Asp Ser Ser Ser His Asn Ser Glu Ala Pro
 195 200

<210> 27
 <211> 108
 <212> PRT
 <213> Xenopus laevis

<400> 27
 Asp Ser Leu Val Gln Leu Lys Asn Asn Gly Tyr Glu Asp Ile Ile Ile
 1 5 10 15
 Ala Val Asn Pro Glu Val Pro Glu Asp Gly Lys Ile Ile Glu Gln Ile
 20 25 30
 Lys Lys Met Leu Thr Asp Ala Ser Ser Tyr Leu Phe Gln Ala Thr Lys
 35 40 45
 Lys Arg Ile Tyr Ile Arg Ser Ala Lys Ile Leu Ile Pro Asn Ser Trp
 50 55 60
 Thr Ser Asn Ser Ser Tyr Gly Arg Pro Lys Leu Glu Ser Tyr Asp Lys
 65 70 75 80
 Ala Asp Val Ile Val Ala Ser Pro Phe Ile His Gly Asp Asp Pro Tyr
 85 90 95
 Thr Leu Pro Val Trp Arg Leu Trp Arg Lys Gly Lys
 100 105

<210> 28
 <211> 124
 <212> PRT
 <213> Xenopus laevis

<400> 28
 Ala Thr Arg Cys Pro Leu Lys Met Gln Gly Ser Tyr Leu Ile Glu Val
 1 5 10 15
 Cys Gln Arg Gly Ile Cys Asn Leu Glu Ala Cys Glu Tyr Asp Glu Asn
 20 25 30
 Thr Gly Leu Tyr Glu Glu Asp Cys Lys Phe Tyr Pro Lys Met Asp Ser
 35 40 45
 Asn Val Glu Glu Ser Val Met Tyr Ala Gln Met Met Glu Pro Val His
 50 55 60
 Ala Phe Cys Asn Ser Ser His Asn Ser Glu Ala Pro Asn Gln Gln
 65 70 75 80
 Asn Arg Leu Cys Ser Gln Gln Ser Thr Trp Asp Val Ile Ser Lys Ser
 85 90 95
 Ser Asp Ile Gln Ser Ser Pro Pro Leu Met Asp Ser Asn Ile Pro Ala
 100 105 110
 Pro Val Val Ser Leu Leu Gln Tyr Lys Asp Arg Val
 115 120

<210> 29
 <211> 96
 <212> PRT
 <213> Xenopus tropicalis

<400> 29
 Asp Ser Leu Val Gln Leu Lys Asn Asn Gly Tyr Glu Asp Ile Ile Ile
 1 5 10 15
 Ala Val Asn Pro Gln Val Pro Glu Asp Gly Lys Ile Ile Glu Asn Ile
 20 25 30
 Lys Lys Met Leu Thr Asp Ala Ser Ser Tyr Leu Phe Gln Ala Thr Lys
 35 40 45
 Lys Arg Leu Tyr Ile Arg Ser Ala Lys Ile Leu Ile Pro Asn Thr Trp
 50 55 60
 Ala Thr Asn Ser Ser Tyr Gly Arg Pro Lys Leu Glu Ser Tyr Asp Lys
 65 70 75 80
 Ala Asp Val Ile Val Ala Pro Pro Phe Val Gln Arg Asp Asp Pro Tyr
 85 90 95

<210> 30
 <211> 201
 <212> PRT
 <213> Rattus norvegicus

<400> 30
 Gly Arg Asp Glu Pro Tyr Thr Arg Gln Phe Thr Lys Cys Gly Lys Lys
 1 5 10 15
 Ala Glu Tyr Ile His Phe Thr Pro Asp Phe Val Leu Gly Arg Lys Gln
 20 25 30
 Lys Glu Tyr Gly Asp Ser Gly Arg Leu Leu Val His Glu Trp Ala His

35	40	45
Leu Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr		
50	55	60
Ser Ala Ser Ser Lys Lys Ile Glu Ala Thr Arg His Val Leu Thr Pro		
65	70	75
Lys Cys Ser Thr Gly Ile Lys Gly Met Asn Lys Ala Gln Val Cys Gln		
85	90	95
Gly Gly Ser Cys Ile Thr Arg Asn Cys Arg Arg Asn Ser Thr Thr Gln		
100	105	110
Leu Tyr Glu Lys Asp Cys Gln Phe Phe Pro Asp Lys Val Gln Thr Glu		
115	120	125
Lys Ser Ser Ile Met Phe Met Gln Ser Ile Asp Ser Val Thr Glu Phe		
130	135	140
Cys Lys Lys Glu Asn His Asn Arg Glu Ala Pro Thr Leu His Asn Gln		
145	150	155
Lys Cys Asp Tyr Arg Ser Thr Trp Glu Val Ile Ser Asn Ser Glu Asp		
165	170	175
Phe Lys Asn Ser Thr Pro Met Glu Met Pro Pro Ser Pro Pro Phe Phe		
180	185	190
Ser Leu Leu Arg Ile Ser Glu Arg Ile		
195	200	

<210> 31
 <211> 333
 <212> PRT
 <213> Rattus norvegicus

<400> 31		
Val Lys Ser Ser Lys Val His Leu Asn Asn Asn Gly Tyr Glu Gly Val		
1	5	10
Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Arg Leu Ile Pro		
20	25	30
Ser Leu Lys Ala Lys Cys Leu Gly Arg Ser Gly Val Leu Ser Gly Ala		
35	40	45
Glu Asn His Glu Leu Ser Ser Arg Ala Leu Cys Cys Trp Gly Cys Phe		
50	55	60
Gly Phe Leu Ala Val Pro His Asn Ala Ala Tyr Thr Ala Asp His Lys		
65	70	75
Gly Asn Gln Ala Asp Val Ile Val Ala Asp Pro His Leu Lys Tyr Gly		
85	90	95
Asp Asp Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly Gln		
100	105	110
Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Ile Asp Asn Leu Ile Ile		
115	120	125
Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu Arg		
130	135	140
Trp Gly Val Phe Asp Glu Tyr Asn Lys Glu Arg Pro Phe Tyr Leu Ser		
145	150	155
Arg Lys Asn Val Val Glu Ala Thr Arg Cys Ser Thr Asp Ile Thr Gly		
165	170	175
Thr Asn Val Val His Glu Cys Gln Gly Gly Ser Cys Val Thr Arg Lys		
180	185	190
Cys Arg Arg Asp Ser Lys Thr Gly Leu Pro Glu Pro Lys Cys Thr Phe		
195	200	205
Ile Pro Asn Lys Ser Gln Thr Ala Arg Ala Ser Ile Met Phe Leu Gln		

210	215	220													
Ser	Leu	Asp	Ser	Arg	Arg	Met	Ile	Phe	Tyr	Gly	Gly	Ile	Lys	Lys	Cys
225							230		235						240
Val	Leu	Asn	Lys	Arg	Gln	Glu	Met	Gly	Leu	Asn	Leu	Gln	Ser	Tyr	Lys
							245		250					255	
Ala	Arg	Val	Leu	Gly	Phe	Ser	Pro	Leu	Tyr	Phe	Gly	Arg	Met	Val	Val
							260		265				270		
Glu	Phe	Cys	Thr	Glu	Lys	Thr	His	Asn	Thr	Glu	Ala	Pro	Asn	Leu	Gln
							275		280				285		
Asn	Lys	Ile	Cys	Asn	Gly	Arg	Ser	Thr	Trp	Asp	Val	Ile	Lys	Glu	Ser
							290		295				300		
Ala	Asp	Phe	Gln	His	Ala	Pro	Pro	Met	Arg	Gly	Thr	Glu	Ala	Pro	Pro
							305		310				315		320
Pro	Pro	Thr	Phe	Ser	Leu	Leu	Lys	Ser	Arg	Gln	Arg	Val			
							325		330						

<210> 32
 <211> 335
 <212> PRT
 <213> Rattus norvegicus

<400> 32																
Met	Val	Pro	Val	Leu	Lys	Val	Leu	Leu	Phe	Leu	Thr	Leu	His	Leu	Leu	
1							5			10				15		
Gln	Asp	Thr	Lys	Ser	Phe	Lys	Val	His	Leu	Asn	Asn	Asn	Gly	Tyr	Glu	
							20			25				30		
Gly	Val	Val	Ile	Ala	Ile	Asn	Pro	Ser	Val	Pro	Glu	Asp	Glu	Arg	Leu	
							35			40				45		
Ile	Pro	Ser	Leu	Lys	Glu	Met	Val	Thr	Gln	Ala	Ser	Thr	Tyr	Leu	Phe	
							50			55				60		
Glu	Ala	Ser	Gln	Gly	Arg	Phe	Tyr	Phe	Arg	Asn	Val	Ser	Ile	Leu	Val	
							65			70				75		80
Pro	Met	Thr	Trp	Lys	Ser	Lys	Ser	Glu	Tyr	Leu	Met	Pro	Lys	Arg	Glu	
							85			90				95		
Ser	Tyr	Asp	Lys	Ala	Asp	Val	Ile	Val	Ala	Asn	Ser	His	Leu	Lys	Tyr	
							100			105				110		
Gly	Asp	Asn	Pro	Tyr	Thr	Leu	Gln	Tyr	Gly	Gln	Cys	Gly	Asp	Arg	Gly	
							115			120				125		
Arg	Tyr	Ile	His	Phe	Thr	Pro	Asn	Phe	Leu	Leu	Thr	Asp	Asn	Val	Arg	
							130			135				140		
Asn	Tyr	Gly	Pro	Arg	Gly	Arg	Val	Phe	Val	His	Glu	Trp	Ala	His	Leu	
							145			150				155		160
Arg	Trp	Gly	Val	Phe	Asp	Glu	Tyr	Asn	Glu	Asp	Arg	Pro	Phe	Tyr	Ile	
							165			170				175		
Ser	Gly	Lys	Asn	Thr	Ile	Glu	Val	Thr	Arg	Tyr	Leu	Cys	Glu	Leu	Ser	
							180			185				190		
Asp	Ser	Thr	Thr	Ser	Tyr	Leu	Arg	Val	Phe	Ser	Arg	Pro	Tyr	Arg	Ala	
							195			200				205		
Val	Gln	Val	Thr	Gly	Cys	Ser	Thr	Asp	Ile	Lys	Gly	Ser	Lys	Ala	Val	
							210			215				220		
His	Glu	Arg	Gln	Arg	Gly	Ser	Asp	Val	Thr	Arg	Leu	Cys	Arg	Trp	Asp	
							225			230				235		240
Ser	Arg	Thr	Gly	Leu	Tyr	Glu	Pro	Lys	Cys	Lys	Phe	Phe	Pro	Asp	Lys	
							245			250				255		
Ile	Gln	Thr	Ala	Arg	Ala	Ser	Ile	Met	Phe	Met	Gln	Asn	Leu	Asn	Ser	
							260			265				270		

Val Val Glu Phe Cys Thr Glu Lys Thr His Asn Thr Glu Ala Pro Asn
 275 280 285
 Leu Gln Asn Lys Ile Cys Asn Gly Arg Ser Thr Trp Asp Val Ile Lys
 290 295 300
 Glu Ser Ala Asp Phe Gln Gln Ala Pro Pro Met Arg Gly Thr Glu Ala
 305 310 315 320
 Pro Pro Pro Pro Thr Phe Ser Leu Leu Lys Ser Arg Gln Arg Val
 325 330 335

<210> 33
 <211> 307
 <212> PRT
 <213> Rattus norvegicus

<400> 33
 Met Gly Ser Leu Lys Ser Pro Val Phe Leu Leu Val Leu Tyr Leu Leu
 1 5 10 15
 Glu Gly Val Leu Ser Asn Ser Leu Ile Gln Leu Asn Asn Asn Gly Tyr
 20 25 30
 Glu Gly Ile Val Ile Ala Ile Asp His Asp Val Pro Glu Asp Glu Ala
 35 40 45
 Leu Ile Gln Arg Ile Lys Asp Met Val Thr Gln Ala Ser Pro Tyr Leu
 50 55 60
 Phe Glu Ala Thr Gly Lys Arg Phe Tyr Phe Lys Asn Val Ala Ile Leu
 65 70 75 80
 Ile Pro Glu Asn Trp Asn Thr Lys Pro Glu Tyr Lys Arg Pro Lys Leu
 85 90 95
 Glu Thr Leu Lys Asn Ala Asp Val Leu Val Ser Thr Met Ser Pro Ile
 100 105 110
 Gly Asn Asp Glu Pro Tyr Thr Glu His Ile Gly Ala Cys Gly Glu Arg
 115 120 125
 Gly Ile Arg Ile His Leu Thr Pro Asp Phe Leu Ala Gly Lys Lys Gln
 130 135 140
 Thr Glu Tyr Gly Pro Gln Asp Arg Thr Phe Val His Glu Trp Ala His
 145 150 155 160
 Phe Arg Trp Gly Val Phe Asp Glu Tyr Asn Asn Asn Glu Lys Phe Tyr
 165 170 175
 Leu Ser Asn Gly Lys Pro Gln Ala Val Arg Cys Ser Ala Thr Ile Thr
 180 185 190
 Gly Lys His Val Val Arg Arg Cys Gln Gly Gly Ser Cys Val Thr Asn
 195 200 205
 Gly Lys Cys Val Ile Asp Arg Val Thr Gly Leu Tyr Lys Asp Asn Cys
 210 215 220
 Val Phe Ile Pro Asp Lys Asn Gln Arg Glu Lys Ala Ser Ile Met Phe
 225 230 235 240
 Asn Gln Asn Ile Asn Ser Val Val Glu Phe Cys Thr Glu Lys Asn His
 245 250 255
 Asn Lys Glu Ala Pro Asn Ala Gln Asn Gln Arg Cys Asn Leu Arg Ser
 260 265 270
 Thr Trp Glu Val Ile Gln Glu Ser Glu Asp Phe Lys Gln Thr Thr Pro
 275 280 285
 Met Thr Ala Gln Pro Pro Ala Pro Thr Phe Ser Leu Leu Gln Thr Arg
 290 295 300
 Gln Arg Ile
 305

<210> 34
 <211> 279
 <212> PRT
 <213> Rattus norvegicus

<400> 34
 Leu Lys Leu Lys Glu Asn Gly Tyr Asp Gly Leu Leu Val Ala Ile Asn
 1 5 10 15
 Pro Arg Val Pro Glu Asp Leu Lys Leu Ile Arg Asn Ile Gln Glu Met
 20 25 30
 Ile Thr Glu Ala Ser Phe Tyr Leu Phe Asn Ala Thr Lys Arg Arg Val
 35 40 45
 Phe Phe Arg Ser Val Gln Ile Leu Ile Pro Ala Thr Trp Thr Ala His
 50 55 60
 Asn Tyr Ser Arg Val Lys Gln Glu Ser Phe Asp Lys Ala Asn Val Leu
 65 70 75 80
 Val Thr Glu Gln Asn Gly Val Pro Gly Glu Asp Pro Tyr Thr Leu Gln
 85 90 95
 His Arg Gly Cys Gly Gln Glu Gly Lys Tyr Ile His Phe Thr Pro Asn
 100 105 110
 Phe Leu Leu Asn Asp Glu Leu Ala Ala Gly Tyr Gly Ser Arg Gly Arg
 115 120 125
 Val Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp Glu
 130 135 140
 Tyr Asn Ser Asp Lys Pro Phe Tyr Val Asn Gly Arg Asn Glu Ile Gln
 145 150 155 160
 Val Thr Arg Cys Ser Ser Asp Ile Thr Gly Val Phe Val Cys Glu Lys
 165 170 175
 Gly Leu Cys Pro His Glu Asp Cys Ile Ile Ser Lys Leu Phe Arg Glu
 180 185 190
 Gly Cys Thr Phe Leu Tyr Asn Ser Thr Gln Ser Ala Thr Gly Ser Ile
 195 200 205
 Met Phe Met Gln Ser Leu Pro Ser Val Val Glu Phe Cys Asn Glu Gly
 210 215 220
 Thr His Asn Arg Glu Ala Pro Asn Leu Gln Asn Arg Val Cys Ser Leu
 225 230 235 240
 Arg Ser Thr Trp Asp Val Ile Thr Gly Ser Ser Asp Leu Asn His Ser
 245 250 255
 Leu Pro Val Leu Gly Val Glu Leu Pro Ala Pro Pro Ser Phe Ser Leu
 260 265 270
 Leu Gln Ala Gly Asp Arg Val
 275

<210> 35
 <211> 246
 <212> PRT
 <213> Rattus norvegicus

<400> 35
 Met Gly Phe Ser Arg Gly Ile Val Phe Leu Leu Leu Tyr Leu Leu
 1 5 10 15
 Gln Gly Ser Asp Thr Ser Leu Val Lys Leu Asn Glu Asn Gly Tyr Glu
 20 25 30
 Asp Ile Ile Ile Ala Ile Asp Pro Ala Val Ser Glu Asp Val Thr Ile
 35 40 45

Ile Asp Gln Ile Lys Asp Met Val Thr Lys Ala Ser Ala Tyr Leu Phe
 50 55 60
 Glu Ala Thr Glu Lys Arg Phe Phe Lys Asn Val Ser Ile Leu Ile
 65 70 75 80
 Pro Glu Asn Trp Thr Asn Ser Asp Gln Tyr Arg Arg Pro Lys Gln Glu
 85 90 95
 Ser Tyr Lys His Ala Asp Ile Lys Val Ala Pro Pro Ala Leu Gln Gly
 100 105 110
 Arg Asp Glu Pro Tyr Thr Arg Gln Phe Thr Lys Cys Gly Lys Lys Ala
 115 120 125
 Glu Tyr Ile His Phe Thr Pro Asp Phe Val Leu Gly Arg Lys Gln Lys
 130 135 140
 Glu Tyr Gly Asp Ser Gly Arg Leu Leu Val His Glu Trp Ala His Leu
 145 150 155 160
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr Ser
 165 170 175
 Ala Ser Ser Lys Lys Ile Glu Ala Thr Arg Cys Ser Thr Gly Ile Lys
 180 185 190
 Gly Met Asn Lys Ala Gln Val Cys Gln Gly Gly Ser Cys Ile Thr Arg
 195 200 205
 Asn Cys Arg Arg Asn Ser Thr Thr Gln Leu Tyr Glu Lys Asp Cys Gln
 210 215 220
 Phe Phe Pro Asp Lys Val Gln Thr Glu Lys Ser Ser Ile Met Phe Met
 225 230 235 240
 Gln Ser Ile Asp Ser Val
 245

<210> 36
 <211> 308
 <212> PRT
 <213> Rattus norvegicus

<400> 36
 Met Val Pro Val Leu Lys Val Leu Leu Phe Leu Thr Leu His Leu Leu
 1 5 10 15
 Gln Asp Thr Lys Ser Phe Lys Val His Leu Asn Asn Asn Gly Tyr Glu
 20 25 30
 Gly Val Val Ile Ala Ile Asn Pro Ser Val Pro Glu Asp Glu Arg Leu
 35 40 45
 Ile Pro Ser Leu Lys Glu Met Val Thr Gln Ala Ser Thr Tyr Leu Phe
 50 55 60
 Glu Ala Ser Gln Gly Arg Phe Tyr Phe Arg Asn Val Ser Ile Leu Val
 65 70 75 80
 Pro Met Thr Trp Lys Ser Lys Ser Glu Tyr Leu Met Pro Lys Arg Glu
 85 90 95
 Ser Tyr Asp Lys Ala Asp Val Ile Val Ala Asn Ser His Leu Lys Tyr
 100 105 110
 Gly Asp Asn Pro Tyr Thr Leu Gln Tyr Gly Gln Cys Gly Asp Arg Gly
 115 120 125
 Arg Tyr Ile His Phe Thr Pro Asn Phe Leu Leu Thr Asp Asn Val Arg
 130 135 140
 Asn Tyr Gly Pro Arg Gly Arg Val Phe Val His Glu Trp Ala His Leu
 145 150 155 160
 Arg Trp Gly Val Phe Asp Glu Tyr Asn Glu Asp Arg Pro Phe Tyr Ile
 165 170 175
 Ser Gly Lys Asn Thr Ile Glu Val Thr Arg Cys Ser Thr Asp Ile Lys

180	185	190
Gly Ser Lys Ala Val His Glu Arg Gln Arg Gly Ser Asp Val Thr Arg		
195	200	205
Leu Cys Arg Trp Asp Ser Arg Thr Gly Leu Tyr Glu Pro Lys Cys Lys		
210	215	220
Phe Phe Pro Asp Lys Ile Gln Thr Ala Arg Ala Ser Ile Met Phe Met		
225	230	235
Gln Asn Leu Asn Ser Val Val Glu Phe Cys Thr Glu Lys Thr His Asn		
245	250	255
Thr Glu Ala Pro Asn Leu Gln Asn Lys Ile Cys Asn Gly Arg Ser Thr		
260	265	270
Trp Asp Val Ile Lys Glu Ser Ala Asp Phe Gln Gln Ala Pro Pro Met		
275	280	285
Arg Gly Thr Glu Ala Pro Pro Pro Pro Thr Phe Ser Leu Leu Lys Ser		
290	295	300
Arg Gln Arg Val		
305		

<210> 37
 <211> 162
 <212> PRT
 <213> Homo sapiens

<400> 37		
Asp Pro Asn Val Pro Glu Asp Glu Thr Leu Ile Gln Gln Ile Lys Asp		
1	5	10
Met Val Thr Gln Ala Ser Leu Tyr Leu Phe Glu Ala Thr Gly Lys Arg		
20	25	30
Phe Tyr Phe Lys Asn Val Ala Ile Leu Ile Pro Glu Thr Trp Lys Thr		
35	40	45
Lys Ala Asp Tyr Val Arg Pro Lys Leu Glu Thr Tyr Lys Asn Ala Asp		
50	55	60
Val Leu Val Ala Glu Ser Thr Pro Pro Gly Asn Asp Glu Pro Tyr Thr		
65	70	75
Glu Gln Met Gly Asn Cys Gly Glu Lys Gly Glu Arg Ile His Leu Thr		
85	90	95
Pro Asp Phe Ile Ala Gly Lys Leu Ala Glu Tyr Gly Pro Gln Gly		
100	105	110
Lys Ala Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe Asp		
115	120	125
Glu Tyr Asn Asn Asp Glu Lys Phe Tyr Leu Ser Asn Gly Arg Ile Gln		
130	135	140
Ala Val Arg Cys Ser Ala Gly Ile Thr Gly Thr Asn Val Val Lys Lys		
145	150	155
Cys Gln		160

<210> 38
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> synthetically generated oligonucleotide

<400> 38		
atgtcgacca tatgattcaa caaataaagg a		31
<210> 39		
<211> 33		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> synthetically generated oligonucleotide		
<400> 39		
atgcggccgc tcacttcttt actacatgg tac		33
<210> 40		
<211> 27		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> synthetically generated oligonucleotide		
<400> 40		
catatgtcac tcattcagct gaacaac		27
<210> 41		
<211> 25		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> synthetically generated oligonucleotide		
<400> 41		
catatggaag atgaaacact cattc		25
<210> 42		
<211> 32		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> synthetically generated oligonucleotide		
<400> 42		
gcggccgctc acttctttac tacatggta cc		32
<210> 43		
<211> 30		
<212> DNA		
<213> Artificial Sequence		
<220>		

<223> synthetically generated oligonucleotide

<400> 43

gcggccgctc acttgttgg agcttctttg

30

<210> 44

<211> 6

<212> PRT

<213> Artifical Sequence

<220>

<223> synthetically generated oligonucleotide

<220>

<221> MISC_FEATURE

<222> 1

<223> (7-methoxy-coumarin-4-yl)acetyl or Mca

<220>

<221> MISC_FEATURE

<222> 6

<223> (2,4-dinitrophenyl)-L-2,3-diaminopropionyl or Dpa

<400> 44

Xaa Lys Ala Met His Xaa

1

5